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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,057	03/22/2004	Takashi Sasabayashi	2803.70169	1512

7590 02/22/2007
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EXAMINER

TON, MINH TOAN T

ART UNIT	PAPER NUMBER
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2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,057	SASABAYASHI ET AL.	
	Examiner	Art Unit	
	Toan Ton	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/03/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claim Rejections - 35 USC § 112

1. Claims 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear to how the liquid crystal layer comprises a cell gap. The liquid crystal layer commonly comprises a thickness, not a cell gap. Thus, claims 21-22 are held indefinite. For examination purposes, the Examiner interpreted the liquid crystal layer comprising a thickness, as in accordance with the disclosure of the present application (e.g., Figure 14b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishimoto et al (US 6721024).

Kishimoto discloses a liquid crystal display (LCD) device comprising (see at least Figures 1-6): two substrates; a liquid crystal layer into which liquid crystal is inserted between opposing surfaces of the two substrates; a structure (e.g., 16, 26) provided so as to partition the liquid crystal layer and forming *at least one domain that is entirely enclosed between said*

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substrates (see at least Figure 2) in each display pixel, wherein the alignment of the liquid crystal molecules while a voltage is being applied is symmetric with respect to a plane parallel to the substrates and almost passing through the center in the direction of the thickness of the liquid crystal layer.

Kishimoto discloses the LCD device comprising the liquid crystal molecules having negative dielectric constant anisotropy (see at least col. 6, lines 9-11) and almost vertically aligned with respect to the substrate surface while no voltage is applied (see at least col. 7, lines 9-12).

Kishimoto discloses the LCD device comprising the tilting orientation of the liquid crystal molecules having two or more directions in each domain when projected on the substrate (see at least Figures 1-6).

Kishimoto discloses the liquid crystal display device comprising the two substrates comprise electrodes (12, 42) on the opposing surfaces thereof, and wherein the structure is provided on the electrode and is made of dielectric material (see at least col. 6, lines 21-22).

Kishimoto discloses the liquid crystal display device comprising the structure having a grid/lattice-like shape (see at least col. 6, lines 28-29).

Per claims 21-22: Kishimoto discloses a liquid crystal display device comprising: two substrates; a liquid crystal layer into which liquid crystal is inserted between opposing surfaces of the two substrates; a structure (e.g., 16 and 20) having *its entire gap thickness equal to a thickness of the liquid crystal layer*, the structure partitioning the liquid crystal layer and enclosing a part of the liquid crystal to form at least one domain in each display pixel.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishimoto et al as applied to claims 1-5 and 21-22 above.

The use of polarizers disposed outside the surface of the substrates having axes orthogonal to each other is common and known in the art to achieve advantages such as high contrast. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ polarizers disposed outside the surface of the substrates having axes orthogonal to each other, as common and known in the art, for achieving advantages such as high contrast.

The use of a phase difference layer (compensator) disposed adjacent to the polarizer/substrate is common and known in the art for achieving advantages such as improving/wide viewing angle. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a phase difference layer disposed adjacent to the polarizer/substrate, as common and known in the art, for achieving advantages such as improving/wide viewing angle.

Response to Arguments

4. Applicant's arguments filed 01/03/07 have been fully considered but they are not persuasive.

Applicant's arguments are as follow:

(1) Kishimoto fails to disclose a structure provided so as to partition the liquid crystal layer and forming at least one domain that is entirely enclosed between the substrates in each display pixel. Further, the claims must be considered three-dimensionally.

(2) Kishimoto fails to disclose a structure having *its entire gap thickness equal to a cell gap of the liquid crystal layer*.

Examiner's responses to Applicant's arguments are as follow:

(1) Kishimoto discloses a structure (e.g., 16) provided so as to partition the liquid crystal layer and forming *at least one domain that is entirely enclosed between the substrates* (see at least Figure 2) in each display pixel. Further, 'a structure (e.g., 16) provided so as to partition the liquid crystal layer and forming *at least one domain that is entirely enclosed between the substrates*' of Kishimoto appears identical to 'a structure provided so as to partition the liquid crystal layer and forming *at least one domain that is entirely enclosed between the substrates*' of the present invention.

It is noted that the features upon which applicant relies (i.e., three-dimensionally) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.

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(2) Kishimoto discloses a structure (e.g., 16 and 20) having *its entire gap thickness equal to a thickness of the liquid crystal layer*. "cell gap" was addressed in 35 USC 112, 2nd rejection above.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 16, 2007


TOAN TON
PRIMARY PATENT EXAMINER